



Licensed Programs

**COPYRIGHT
INSTRUCTIONS**

PREFACE

This booklet provides information and instructions on the use of licensed programs and licensed optional materials constituting licensed program materials furnished by IBM under an Agreement for IBM Licensed Programs or an earlier License Agreement for IBM Program Products pursuant to a customer order for a licensed data processing program. Where the licensed program is procured under the earlier Agreement, that Agreement's provisions will continue to apply. All such data processing programs are copyrighted and examples include Program Products, Industry Application Programs, Problem Solver Libraries, Field Developed Programs, Installed User Programs, and PRPQs (Program Request for Price Quotations).

IBM COPYRIGHT PRACTICES

IBM has developed and published, in machine readable and printed form, licensable program materials including licensed programs and licensed optional materials. Each of these items is protected by national and international copyright. Each is assigned a seven character identification code or program number (e.g., 5736-CX1) which constitutes the formal title of the work.

The U.S. copyright law states that the original and any authorized copies of a copyrighted work must contain a copyright notice in a proper place in order to put the general public on notice that the work is copyrighted. Although such copyright notice is not required by the local laws of many countries outside of the U.S., the copyright notice should always be present in licensable program materials in every country to ensure against the loss of copyright in the United States.

IBM normally includes a notice of the following type: "5736-CX1 COPYRIGHT IBM CORP 1969 LICENSED MATERIAL - PROGRAM PROPERTY OF IBM" in its licensable program materials. The Universal Copyright Convention symbol "©" is inserted in the notice before the word "COPYRIGHT" wherever technically possible. The date included in the notice is the year in which the particular work was first published. If the work is a new release which contains some previously copyrighted material published in an earlier year (i.e., a revision or update) the notice may include both dates (i.e., "5736-CX1) © COPYRIGHT IBM CORP 1969, 1970").

IBM markets some programs such as Installed User Programs under licenses from others. In such a program the copyright is in the name of the other party. Therefore, the notice of the other party, must be treated in the same manner as specified herein for the IBM notice.

IBM includes a copyright notice in traditional form on the title page or the reverse thereof or on the front cover or back side of the front cover, of all books, manuals, or pamphlets distributed in printed form.

External Notice

IBM places labels bearing the copyright notice in printed form on the exterior of machine readable media as described in Appendix A.

Internal Notice

IBM also includes internal copyright notices in the machine readable code as described in Appendix B.

Assignability

The Agreement for IBM Licensed Programs includes a General section having a paragraph as follows:

This Agreement is not assignable; none of the licenses granted hereunder nor any of the licensed program materials or copies thereof may be sublicensed, assigned or transferred by the Customer without the prior written consent of IBM. Any attempt to sublicense, assign or transfer any of the rights, duties or obligations under this Agreement is void.

License

The Agreement for IBM Licensed Programs includes a License section having a paragraph as follows:

No right to use, print, copy or display the licensed program materials, in whole or in part, is granted hereby except as expressly provided in this Agreement.

Protection and Security

With respect to all copies of the licensed program materials, the Protection and Security of Licensed Program Materials section provides as follows regarding access, ownership, reproduction of copyright notice, records, and erasure or destruction:

The Customer will take appropriate action, by instruction, agreement or otherwise, with any persons permitted access to licensed program materials so as to enable the Customer to satisfy the Customer's obligation under this Agreement.

All copies of licensed program materials made by the Customer including translations, compilations, partial copies within modifications and updated works are the property of IBM. The Customer will reproduce and include the copyright notice on any such copies in accordance with the copyright instructions provided by IBM.

The Customer will maintain records of the number and location of all copies of licensed program materials and will notify IBM in writing if the original or any copy of the licensed program materials will be kept at an installation (or location, when IBM has specified "Location License Applies") other than that of the machine designated in the applicable Supplement.

The Customer will insure, prior to disposing of any media, that any licensed program materials contained thereon have been erased or otherwise destroyed.

The Customer will not provide or otherwise make available any licensed program materials in any form without IBM's prior written consent except to Customer

employees, IBM employees or other persons during the period they are on the Customer's premises for purposes specifically related to the Customer's use of the licensed program.

CUSTOMER COPYING AND MODIFICATION

Copying

As noted herein before, the Customer is not free to print, copy or display the licensed program materials, except as expressly provided in the Agreement for IBM Licensed Programs.

However, the Customer may copy materials in machine readable form to the extent indicated in the License section of the Agreement for IBM Licensed Programs and which reads in part as follows:

Each license granted under this Agreement authorizes the Customer to —

copy the licensed program materials in machine readable form into any machine readable or printed form to provide sufficient copies to support the Customer's use of the licensed program as authorized under this Agreement. Licensed program materials provided by IBM in printed form may not be copied. Additional copies may be obtained under license from IBM at the charges then in effect.

Modification of licensed program materials is permitted in the Permission to Modify section which reads as follows:

The Customer may modify any licensed program materials in machine readable form and/or merge such materials into other program material to form an updated work for the Customer's own use; provided that, upon discontinuance of the licensed program, the licensed program materials will be completely removed from the updated work and dealt with under this Agreement as if permission to modify or merge had never been granted. Any portion of the licensed program materials included in such an updated work will continue to be subject to all terms of this Agreement.

Of course, the provisions of the Protection and Security of the Licensed Program Materials section apply to all modification copies, too.

If the Customer makes a copy of licensed program materials as authorized by the Agreement for IBM Licensed Programs,

the internal copyright notice in the machine must be reproduced as described in Appendix B. The Customer must also place a printed label on any removable media (i.e., cards, magnetic tapes and disks, etc.) which contains such authorized copies of any portion of an IBM copyrighted work.

IBM recognizes that it may be necessary for the Customer to merge authorized copies of several licensed program materials in machine readable form, to form a working library. Since it therefore may be impossible to place on the external copyright notice label or labels the copyright notice for each licensed program included in the media, IBM has prepared a General Notice on pre-printed labels (which will be provided by IBM*). This General Notice includes provisions for identifying the number and copyright notice of the first licensed program material in the media. The Customer must place this General Notice on the exterior of any removable media which contains authorized copies of IBM copyrighted works in such numbers as to preclude external label listing of their individual copyright notices.

The General Notice will read as follows:

"This media contains authorized copies of which the first is (Program Number) COPYRIGHT IBM 19____ which are the properties of IBM, of copyrighted IBM Licensed Program materials made under the terms of the Agreement for IBM Licensed Programs and/or the License Agreement for IBM Program Products.

A copyright notice is included in these machine readable copies as described in the Copyright Instructions distributed by IBM, and must be reproduced in all copies authorized by the Agreement."

If the Customer copies a part of licensed program material (other than by a language processor compilation operation upon a non-licensed program) or makes an authorized modification (including compilation of a licensed program) under the terms of the Agreement, the internal copyright notice must be included in the machine readable code of this updated work. Appendix B describes the method for including the internal copyright notice.

A Customer-written program compiled using language processor licensed libraries and incorporating subroutines therefrom may be used with any CPU and the Customer need not specially insert the IBM copyright notice into the program nor destroy the program upon license discontinuance. Licensed

program materials modified with updating code need not have their copyright notices updated. If the Customer makes a printout of licensed program material, or any part thereof, whether by core dump printing or otherwise, as authorized by the Agreement, the IBM copyright notice must be recorded on the first page thereof. This recordation need not be done when the internal copyright notice is printed in English within the printout.

Return or Destruction of all copies on License Discontinuance

After discontinuing any license, the Customer is required to return or destroy all copies of the licensed program materials and to certify thereto (unless customer has licensed a new version of the licensed program materials). Thus the Return or Destruction of Licensed Program Materials section provides in part as follows:

Within one month after the date of discontinuance of any license granted hereunder, the Customer will furnish to IBM a completed form entitled IBM Licensed Program Certificate of Return or Destruction certifying that through the Customer's best effort, and to the best of the Customer's knowledge, the original and all copies of the licensed program materials received from IBM or made in connection with such license have been returned or destroyed. This requirement will apply to all copies in any form including translations, whether partial or complete, and whether or not modified or merged into other program materials as authorized herein. However, upon prior written authorization from IBM, the Customer may retain a copy for archive purposes only.

It is suggested that the Customer create and maintain a log of all copies he makes under the Agreement, including any partial copies or modifications. The log should record the date the copy was made, the kind of media, the location at which it will be kept, and the person responsible for that copy. This log may also facilitate the Customer's distribution of error corrections, as well as the removal of licensed program material from an updated work in the event of discontinuance of the licensed material.

*Preprinted labels are provided in two forms. The first form has the adhesive on the back and is to be used with most removable media. However, the IBM 3336 and 2316 Disk Packs, because of their high rotational speed, require special mounting of a label. To this end, a second form (P/N 2275457) is provided, having the adhesive on the front. It is to be applied to the back of the Customer ID label (P/N 2275259). (Please refer to the IBM Disk Pack Handling Guide, (GA26-5756), for further information.) Only the second form should be placed on the 3336 and 2316 Packs. A quantity of each form will be included, as appropriate, with each product shipped from IBM. Additional labels can be obtained through the local IBM Branch Office.

GENERAL

While this booklet sets forth in a general way some of a Customer's rights and responsibilities, the Customer must look to his Agreement for IBM Licensed Programs for a complete understanding of his rights and responsibilities thereunder.

APPENDIX A

Printed Labels: Copyright Notice on Media Shipped from IBM Program Information Department (or Program Library or other distribution center).

The following lists the media, the form of notice, and places where it will appear:

1. PAPER TAPE

- a. "(Program number) COPYRIGHT IBM CORP (Date)
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM,"
punched in leader and trailer.

2. CARDS

- "(Program number) © COPYRIGHT IBM CORP (Date)
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM,"
printed on first card of each physically packaged part of a
licensed program.

3. TAPE

- "(Program number) © COPYRIGHT IBM CORP (Date)
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM,"
on label affixed to exterior of tape reel or integral cartridge
or cassette. A single label may contain multiple notices,
handprinted if necessary.

4. DISK

- "(Program number) © COPYRIGHT IBM CORP (Date)
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM,"
on label affixed to disk pack or integral cartridge or individ-
ual disk or diskette cover. A single label may contain
multiple notices, handprinted if necessary.

APPENDIX B Copyright Notice in Machine Readable Form and in Printouts

FORM OF COPYRIGHT INFORMATION

- 1 Comments appearing within the first twenty lines of source code have the form:

"program number COPYRIGHT IBM CORP 19XX
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM
REFER TO COPYRIGHT INSTRUCTIONS FORM NO. G120-2083"

These comments will also appear within the first twenty records of the program machine readable storage media.

2. An Alphameric constant (which will be read into storage) has the form:

"program number COPYRIGHT IBM CORP 19XX
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM"

This alphameric constant consists of a program number which is up to eight alphameric characters (e.g. 5736-CX1) followed by COPYRIGHT IBM CORP 1969 LICENSED MATERIAL - PROGRAM PROPERTY OF IBM. This example would appear in hexadecimal, in a storage dump as:

F5F7F3F660C3E7F140C3D6D7E8D9C9C7C8E340C9C2D440C3D6D9D740F1F9F6F940D3C9C3C5D5E2C5C440D4C1E3C5D9C9
C1D3406040D7D9D8C7D9C1D440D7D9D6D7C5D9E3E840D6C640C9C2D4

This constant must appear in any subsequent modification of this program or the program's components.

LOCATION OF COPYRIGHT NOTICE

Comments: The copyright notice appears on a source language listing within the first twenty lines of source code.

For example:

ASSEMBLER LANGUAGE: *program number COPYRIGHT IBM CORP 1969
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM REFER TO COPYRIGHT INSTRUCTIONS FORM NO. G120-2083

PL/1:/* program number COPYRIGHT IBM CORP 1969 LICENSED ... REFER TO .../

FORTRAN: C program number COPYRIGHT IBM CORP 1969 LICENSED ... REFER TO ...

COBOL: REMARKS. program number COPYRIGHT IBM CORP 1969 LICENSED ... REFER TO ...

or

* program number COPYRIGHT IBM CORP 1969 LICENSED ... REFER TO ...;

RPG & RPG II: F* program number COPYRIGHT IBM CORP 1972 LICENSED ... REFER TO ...

APL: program number COPYRIGHT IBM CORP 1972 LICENSED ... REFER TO ...

ALGOL: 'COMMENT' program number COPYRIGHT IBM CORP 1972 LICENSED ... REFER TO ...;

BASIC: REM program number COPYRIGHT IBM CORP 1972 LICENSED ... REFER TO ...

Alphanumeric Constant: Location of the constant in a hexadecimal storage dump of the program is dependent on the source language used in the program, and resulting linkage editor displacement values. To assist in locating the constant, the following guidelines are provided:

APPENDIX B (continued)

A general guideline is to scan a printout (e.g., in EBCDIC) of the program or system, for the copyright constant (program number COPYRIGHT IBM CORP 19XX LICENSED MATERIAL - PROGRAM PROPERTY OF IBM) to determine if a program or system in storage is copyrighted by IBM.

More detailed guidelines developed below are applicable to particular IBM source languages. In these cases, to facilitate locating the constant, such items as a linkage editor cross reference listing or source language compilation listings may be needed.

ASSEMBLER LANGUAGE:	The constant may be located following the first executable instruction in the program or may begin at the first byte of the program storage area.
COBOL:	In order to facilitate location of the constant in a compiled COBOL program, use a map of the compiled code to locate the name COIBM.
FORTRAN:	Locate the name COIBM in the core map produced by the linkage editor or loader. The offset provided will give the location of the subroutine containing the constant.
PL/I:	Using the linkage editor cross reference listing locate the name "COIBM". The offset provided will give the location of the vector associated with COIBM. The actual location of the constant will be found using the first words of the vector.
RPG & RPG II:	Use the compiler listing to obtain the address of the copyright literal (or the beginning of the literals). Depending on the system, locate the copyright notice in core by using the address or by adding the address to the program load point.
APL:	From an APL terminal, type COIBM. The alphameric constant will be displayed.

ALGOL:	Using the linkage editor cross reference listing locate the name "COIBM". The offset provided will give the location of the vector associated with COIBM. The actual location of the constant will be found using the first words of the vector.
BASIC:	Use the object code listing of the BASIC program to locate the single line functions FNY\$ and FNZ\$ that contain the constant. A cross reference list of these functions may be available for some processors.

INSERTION OF COPYRIGHT NOTICE IN A COPIED PORTION OR MODIFICATION

To incorporate the copyright notice in a program, a copied portion, or a modification as provided in the Agreement for IBM Licensed Programs, comments and a stored alphameric constant as described above must be used. The following techniques are suggested:

Comments: Use the form and location illustrated in the section of this Appendix entitled LOCATION OF COPYRIGHT NOTICE for various languages. This may be done using standard comment cards or lines for the respective languages.

Alphameric Constant:

ASSEMBLER LANGUAGE:	Place the following code at the beginning of the modular unit code: Statement 1: A constant identifying the entry point, (an) instruction(s) to establish addressability, or an unconditional branch to statement 3 may be inserted before the copyright notice. Statement 2: A character constant containing the program number followed by Copyright IBM CORP 197X LICENSED MATERIAL - PROGRAM PROPERTY OF IBM Statement 3: The next executable instruction of the program.
COBOL:	Insert the following entry as the first level 77 entry in the WORKING-STORAGE SECTION of the DATA DIVISION of the COBOL source program to be translated by an ANS-compatible COBOL compiler. 77 COIBM PICTURE X(76) VALUE IS "program number COPYRIGHT IBM CORP 197X LICENSED MATERIAL - PROGRAM PROPERTY OF IBM"

APPENDIX B (Continued)

FORTRAN: A subroutine of the form shown below is accepted by all ANS-compatible FORTRAN compilers.

EXAMPLE:

```
SUBROUTINE COIBM
100  FORMAT (76H program-number COPYRIGHT IBM CORP 19XX
      LICENSED MATERIAL - PROGRAM PROPERTY OF IBM)
      RETURN
      END
```

This subroutine must be invoked by a CALL statement appearing as the entry point of the program.

PL/I: The first declare statement of the PL/I program must be of the form shown below.
DCL COIBM CHAR (76) EXTERNAL INITIAL
('program-number COPYRIGHT IBM CORP 19XX
LICENSED MATERIAL - PROGRAM PROPERTY OF IBM');

APL: Insert a function of the form shown below.

▽ COIBM

(1) 'Program-number COPYRIGHT IBM CORP 19XX'

(2) "LICENSED MATERIAL - PROGRAM PROPERTY OF IBM"

▽

This function may be displayed by executing COIBM.

ALGOL: A procedure of the form:
'PROCEDURE' COIBM;
'BEGIN' 'STRING' (76);
X: = ' ('program number COPYRIGHT IBM CORP 197X LICENSED MATERIAL - PROGRAM PROPERTY OF IBM')'
'END';

This procedure is invoked by writing:
'PROCEDURE' COIBM; 'CODE'; COIBM;

RPG: Place the copyright notice in the output following the first record line(s) and before the first output field to be inserted in the record.
In the example, the copyright notice will not be output if indicator 57 is set off during the program.

RPG OUTPUT FORMAT SPECIFICATIONS

Field Name:	FORM TYPE	OUTPUT INDICATORS	END POSITION	CONSTANT OR EDIT WORD
Column:	6	24-25	42-43	45-70
	0	57	23	'prog. no. COPYRIGHT IBM'
	0	57	42	'CORP 19XX' LICENSED'
	0	57	61	'MATERIAL - PROGRAM'
	0	57	76	'PROPERTY OF IBM'

RPG II: Place the copyright notice in an array form as defined in the Extension Card.
See example below:

Field Name:	FORM TYPE	TABLE OR ARRAY NAME	ENTRIES /RECORD	ENTRIES /T OR A	LENGTH OF ENTRY
Column:	6	27 thru 32	33-35	36-39	40-42
	H cards				
	F cards				
	E	COIBM	1	1	76
	I cards				
	C cards				
	O cards				

..

prog-no. COPYRIGHT IBM CORP 19XX LICENSED MATERIAL - PROGRAM PROPERTY OF IBM

/*

BASIC: The first two single-line function definitions, DEF, of the BASIC program must be of the form shown below:

10 DEF FNY\$= 'program-number' COPYRIGHT IBM CORP 19XX'

20 DEF FNZ\$= LICENSED MATERIAL-PROGRAM PROPERTY OF IBM.'

APPENDIX C

Copyright Notice Required on Media containing Authorized Copies of Licensed Program Materials.

Internal Copyright notices in licensed program materials normally are automatically reproduced in an authorized copy. If, on account of customer modification or taking of only a portion or other reason, an appropriate copyright notice is not reproduced in an authorized copy, a copyright notice of the form and location set forth in Appendix B must be inserted using techniques such as those suggested in Appendix B.

A visually perceptible human readable notice of the form — program number ® COPYRIGHT IBM CORP 197X LICENSED MATERIAL - PROGRAM PROPERTY OF IBM—, and as by an external label provided by IBM, must be applied to each authorized copy as follows:

- a. Tape—The human readable notice is to be applied to the reel or integral cartridge or cassette.
- b. Disk—The human readable notice is to be applied to the hub of the disk pack, or integral cartridge or individual disk or diskette cover.

The required human readable notice for cards and paper tape copies may be obtainable as follows:

- a. Paper Tape—Reproduce on all copies the copyright notice as it appears on the leader and trailer of the original tape published by IBM.
- b. Cards—Retain copyright notice card on the original deck published by IBM, and reproduce this notice on the copies of the IBM copyright separator cards.

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